

C) REMARKS

The present invention is directed to the separation of particle fractions from a particulate feed and, more particularly, to such a separation accomplished using ferrofluids and an applied magnetic field. A particulate feed is provided comprising a first particle type and a second particle type that are separated by providing a separation apparatus having a separation vessel having a top and a bottom, and wherein the separation vessel includes inwardly sloping side walls, wherein the separation between the side walls is greater at the top of the separation vessel than at the bottom of the separation vessel. A magnet structure has a first pole positioned exterior of and adjacent to each of the side walls of the separation vessel, and a second pole positioned above the separation vessel. A mixture of the particulate feed and a ferrofluid is introduced into the separation vessel, and the particulate feed is separated into a first particle fraction comprising a majority of the first particle type, which sinks in the separation vessel, and a second particle fraction comprising a majority of the second particle type which floats in the separation vessel.

Remarks Concerning the Claims

Claims 1-18 are pending in the subject application. Claim 1 is currently amended, as set forth in the new Listing of Claims provided herein. This amendment is provided in response to the Office Action dated April 7, 2005. In that action, the Examiner rejected claims 1-18 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner particularly stated that "Claim 1 recites the limitations 'their top ends' and 'their bottom ends' in lines 5 and 6. There is insufficient antecedent basis for this limitation in the claim. It is not clear what is being referenced. This renders the claim indefinite."

Applicant submits that the Examiner's rejection under 35 U.S.C. § 112 is easily corrected. The meaning of the terms "their top ends" and "their bottom ends" is clear from the specification at paragraph 18 describing the separation vessel and the side walls, and as illustrated in FIGS. 2-3. Applicant has revised

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the claim to delete the reference to "their top ends" and "their bottom ends", and to describe the spacing between the side walls at the top of the separation vessel as being greater than the spacing between the side walls at the bottom of the separation vessel. Thus, the antecedent basis problem was simply one of claim language section, and is easily corrected. No new matter is presented by this amendment. For these reasons, Applicant requests that the Examiner remove the rejection under 15 U.S.C. §112, second paragraph.

D) CONCLUSION

In view of the above, Applicant respectfully requests entry of this amendment, reconsideration of the Application and withdrawal of the outstanding rejections. As a result of the amendments and remarks presented herein, Applicant respectfully submits that claims 1-18 are now allowable.

As the claims are not anticipated by nor rendered obvious in view of any identified prior art, Applicant requests withdrawal of the outstanding rejections and allowance of claims 1-18. If the Examiner believes that prosecution of this Application could be expedited by a telephone conference, the Examiner is encouraged to contact applicant's attorney at the phone number listed below.

The Commissioner is hereby authorized to charge any additional fees and credit any overpayments to Deposit Account No. 50-1059.

Respectfully submitted,

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